

tropomodulin 2 (N-12): sc-19201

BACKGROUND

Originally isolated from human erythrocytes, the tropomodulin (TMOD) family of proteins cap the pointed end of Actin filaments. A component of the membrane skeleton, TMOD binds to the amino-terminus of Tropomyosin, which coats the surface of Actin, and thus blocks the elongation and depolymerization of Actin filaments. Four TMOD isoforms, TMOD 1-TMOD 4, have been characterized in humans. TMOD expression is isoform-specific; TMOD 3 is expressed ubiquitously, whereas TMOD 2 and TMOD 4 are expressed in neuronal tissue and muscle, respectively. The human TMOD 2 gene maps to chromosome 15q21.1-q21.2, which is within the same region as the gene for amyotrophic lateral sclerosis 5 (ALS5), and encodes a 351 amino acid protein. NTMOD, the rat homolog to TMOD2, is expressed predominantly in rat brain. NTMOD binds to the neuron-specific isoform TMbr2 and is the major binding protein to brain Tropomyosin in rat.

REFERENCES

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3. Kimura, S., Ichikawa, A., Ishizuka, J., Ohkouchi, S., Kake, T. and Maruyama, K. 1999. Tropomodulin isolated from rabbit skeletal muscle inhibits filament formation of Actin in the presence of Tropomyosin and troponin. *Eur. J. Biochem.* 263: 396-401.
4. Lee, A., Fischer, R.S. and Fowler, V.M. 2000. Stabilization and remodeling of the membrane skeleton during lens fiber cell differentiation and maturation. *Dev. Dyn.* 217: 257-270.
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6. Cox, P.R., Siddique, T. and Zoghbi, H.Y. 2001. Genomic organization of tropomodulins 2 and 4 and unusual intergenic and intraexonic splicing of YL-1 and tropomodulin 4. *BMC Genomics* 2: 7.

CHROMOSOMAL LOCATION

Genetic locus: TMOD2 (human) mapping to 15q21.1-q21.2; Tmod2 (mouse) mapping to 9 D.

SOURCE

tropomodulin 2 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of tropomodulin 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19201 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

tropomodulin 2 (N-12) is recommended for detection of tropomodulin 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for tropomodulin 2 siRNA (h): sc-43464 and tropomodulin 2 siRNA (m): sc-43465.

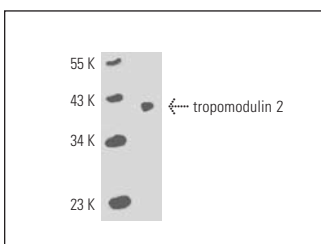
Molecular Weight of tropomodulin 2: 40 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



tropomodulin 2 (N-12): sc-19201. Western blot analysis of tropomodulin 2 expression in mouse brain tissue extract.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.